SUBSET 06 - SITE ILLUMINATION INDEX OF DRAWINGS

SHEET NUMBER	DRAWING TITLE	SHEET NUMBER	DRAWING TITLE
06.01	SITE ILLUMINATION SUBSET COVER SHEET		
06.02	GENERAL ILLUMINATION NOTES & ABBREVIATIONS		
06.03	SITE ILLUMINATION INDEX PLAN		
06.04	SITE ILLUMINATION PLAN-1		
06.05	SITE ILLUMINATION PLAN-2		
06.06	SITE ILLUMINATION PLAN-3		
06.07	SITE ILLUMINATION PLAN-4		
06.08	SITE ILLUMINATION DETAILS		
06.09	SITE ILLUMINATION DETAILS		
06.10	SITE ILLUMINATION DETAILS		
06.11	SITE ILLUMINATION DETAILS		

DESIGNED BY: VN ENGINEERS, INC.	
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				THE INFORMATION, INCLUDING ESTIMATED
				QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED
				INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE
				THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.
				or work wild will be regarded
₹V.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 3/27/2015

DESIGNER/DRAFTER:

JLD

CHECKED BY:

JLW

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

Filename: 20_ILIN_3010088_IL-000.dgn

NEW HAVEN RAIL YARD FACILITIES IMPROVEMENTS MAINTENANCE OF WAY BUILDING

DRAWING NO.

IL - 000

SHEET NO.

06.01

SUBSET COVER SHEET 06.01

Connecticut Department of Transpo

GENERAL NOTES:

- 1. LIGHTING CIRCUITS IN NORTH PARKING AREA AND ADJACENT TO MAIN BUILDING ARE 480 VOLT, 30, 3 WIRE. LIGHTING CIRCUITS LOCATED AT 152 BREWERY STREET ARE 240 VOLT, 30, 3 WIRE.
- 2. THE CONTRACTOR IS TO INSTALL 1 #2 BARE COPPER GROUNDING CONDUCTOR THROUGHOUT ALL LIGHTING CIRCUITS.
- 3. THE CONTRACTOR SHALL CONTACT THE ENGINEER WHEN ACCESS TO A CIRCUIT IS REQUIRED, AND FOLLOW ALL METRO NORTH RAILROAD LOCKOUT/TAGOUT PROCEDURES.
- 4. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO CALL FOR A COMPLETE ELECTRICAL INSTALLATION. IT IS NOT THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO INCLUDE EVERY DETAIL OF ELECTRICAL WORK REQUIRED TO BE PERFORMED BY THE CONTRACTOR TO MAKE A COMPLETE INSTALLATION. ITEMS NOT SHOWN ON THE DRAWINGS OR INCLUDED IN THE SPECIFICATIONS, THAT ARE REQUIRED TO BE PERFORMED BY THE CONTRACTOR TO PERFORM HIS WORK ARE TO BE INCLUDED AS PART OF HIS WORK.
- 5. ALL OF THE CONTRACTOR'S ELECTRICAL WORK SHALL CONFORM TO THE LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, PROJECT SPECIFICATIONS, MNR STANDARDS, AND NATIONAL ELECTRICAL SAFETY CODE.
- 6. LOCATION OF EXISTING ILLUMINATION ON PLANS IS APPROXIMATE AND MUST BE VERIFIED IN THE FIELD.
- 7. CONTRACTOR TO PROVIDE NAMEPLATES ON EACH WOOD LIGHT POLE, CONTAINING POLE NUMBER, SERVICE AND CIRCUIT INFORMATION.

STRUCTURE COORDINATES

STRUCTURE NO	NORTH	EAST
MOW 900A	668999.35	952639.97
MOW 905B	668812.38	952467.86
MOW 910B	668878.07	952603.36
MOW 915B	668938.64	952752.70
MOW 920B	668972.40	952836.08
MOW 925C	668635.10	952614.29
MOW 930C	668700.89	952584.25
MOW 935C	668709.37	952689.06
MOW 940B	668795.10	952790.27
MOW 945C	668864.94	952902.00
MOW 950C	688766.26	952980.22
MOW 955C	668725.91	953004.52
MOW 960C	668635.96	952968.60
MOW 965C	668542.71	952932.31
MOW 970C	668451.91	952907.46
WP-2C	670262.03	952822.14
WP-3D	670249.40	952923.43
WP-4D	670232.99	952970.63
WP-5D	670223.61	953019.60
WP-6D	670215.06	953068.86
WP-7D	670206.51	953118.13
WP-8D	670196.59	953175.27
WP-9D	670157.73	953159.39
LS-1	669028.78	952690.48
LS-2	670269.35	952916.19

HANDHOLE / JUNCTION BOX COORDINATES

STRUCTURE NO	NORTH	EAST
HH 900	668996.66	952633.39
HH 905	668816.45	952474.30
HH 910	668881.55	952611.93
HH 915	668942.05	952761.01
HH 920	668969.00	952827.77
HH 925	668640.10	952606.77
HH 930	668706.55	952578.22
HH 935-1	668712.07	952695.49
HH 935-2	668768.82	952668.76
HH 940	668822.93	952790.81
HH 945	668873.49	952902.50
JB 950	668771.49	952977.56
HH 950	668803.23	952955.72
JB 955	668732.25	953003.00
JB 960	668641.08	952971.20
JB 965	668548.70	952934.11
HH 965	668532.73	952932.99
HH 970	668457.24	952911.73
HH 975	668901.63	952669.80
JB 980	668792.88	952963.31
HH WP-2	670256.21	952819.18
HH WP-3	670247.43	952930.45
HH WP-4	670239.87	952971.85
HH WP-5	670231.15	953020.94
HH WP-6	670222.41	953070.17
HH WP-7	670213.66	953119.40
HH WP-8	670203.52	953176.50
HH WP-9	670164.66	953160.63

<u>LUMINAIRE SCHEDULE</u>					
TYPE	NUMBER	LAMP WATTAGE	LAMP TYPE	DESCRIPTION	OPERATING VOLTAGE
A	MOW 900A	284	LED	284 WATT 30'MH TYPE II DISTRIBUTION	480v
В	MOW 905B, MOW 910B, MOW 915B, MOW 920B, MOW 940B	284	LED	2-284 WATT SYMMETRIC LED LIGHT 30'MH TYPE IV DISTRIBUTION	480v
С	MOW 925C, MOW 930C, MOW 935C, MOW 945C, MOW 950C, MOW 955C, MOW 960C, MOW 965C, MOW 970C, *WP-2C	284	LED	284 WATT 30'MH TYPE IV DISTRIBUTION	480v *240v
D	WP-3D, WP-4D, WP-5D, WP-6D, WP-7D, WP-8D, WP-9D	146	LED	146 WATT LED 30' MH TYPE V	240v

ABBREVIATIONS:

	CENTERLINE
C	CONDUIT
CIRC	CIRCUIT
EXIST	EXISTING
GRND	GROUND
HM	HIGHMAST
HPS	HIGH PRESSURE SODIUM
_GT, LTG	LIGHTING
•	MANUFACTURER
MIN	MINIMUM
MNR	METRO NORTH RAILROAD
MTD	MOUNTED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
)	POLE
PΤ	POINT
PVC	POLYVINYL CHLORIDE CONDUIT
REL	RELOCATE
RMC	RIGID METAL CONDUIT
JNO	UNLESS NOTED OTHERWISE
NP	WOOD POLE
XFMR	TRANSFORMER
•••••	

<u>LIGHTING STATISTICS</u>					
	AVERAGE (fc)	MAX (fc)	MIN (fc)	MAX/MIN (fc)	AVE/MIN (fc)
BREWERY STREET PARKING	2.4	7.3	0.7	10.4:1	3.4:1
NEW BUILDING PARKING	2.3	5.7	0.7	8.1:1	3.3:1
NEW STORAGE AREA	2.8	6.0	0.6	10.0:1	4.7:1

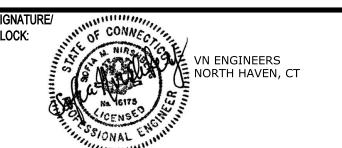
NEW HAVEN YARD CONSTRUCTION CONTRACT DESIGNATIONS

300-0131	M-8 ACCEPTANCE FACILITY
300-0137	EMU AND CSR CAR SHOP IMPROVEMENT
300-0138	WEST END YARD
300-0139	INDEPENDENT WHEEL TRUE FACILITY
301-0097	FUELING FACILITY
301-0106	COMPONENT CHANGE OUT SHOP
301-0110	DIESEL STORAGE YARD
301-0123	PEDESTRIAN BRIDGE OVERPASS
301-0124	MAINTENANCE OF WAY BUILDING
301-0144	YARD POWER UPGRADE

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٧.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 3/29/2015

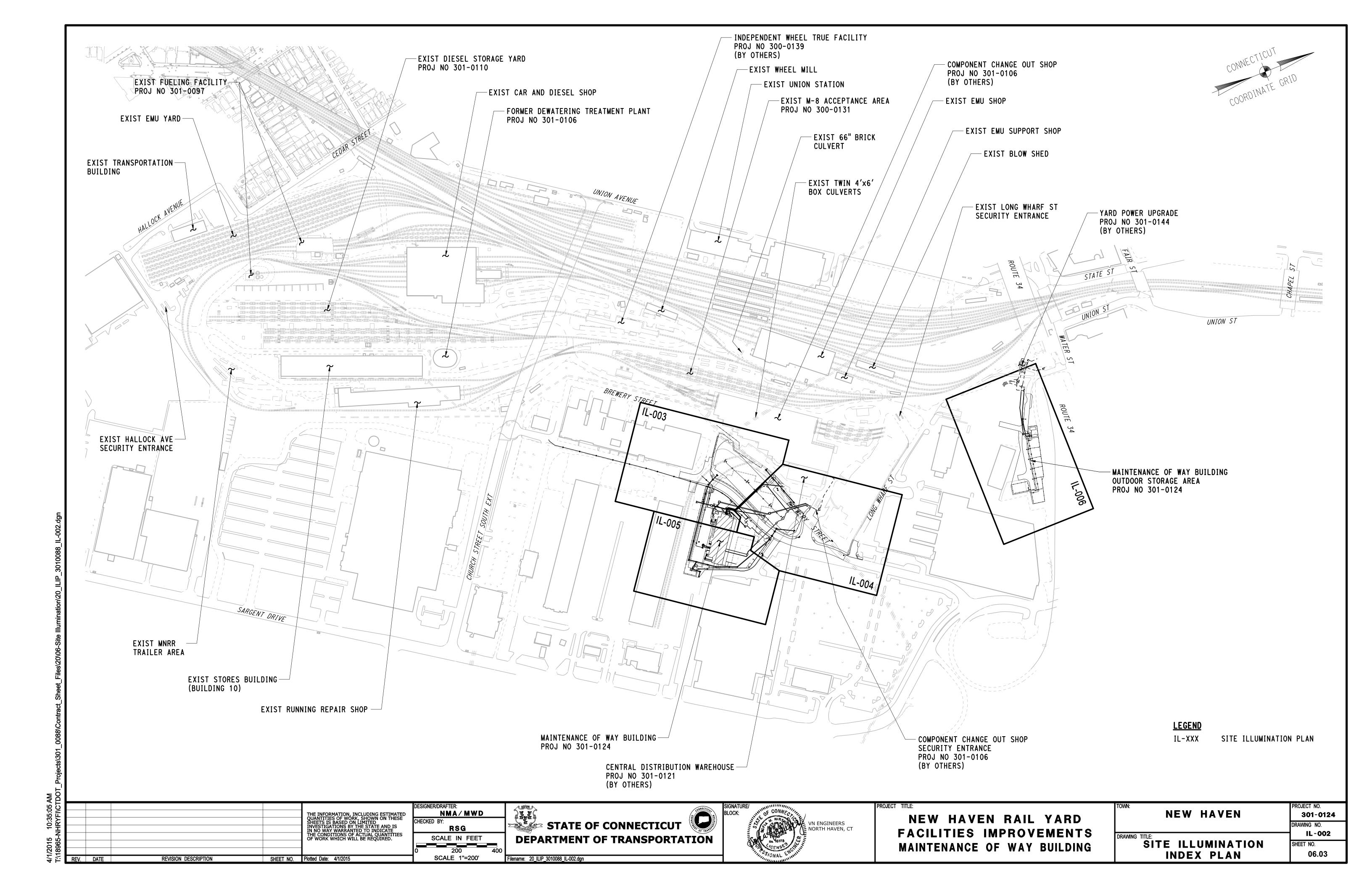
SIGNER/DRAFTER:
NMA/MWD RSG

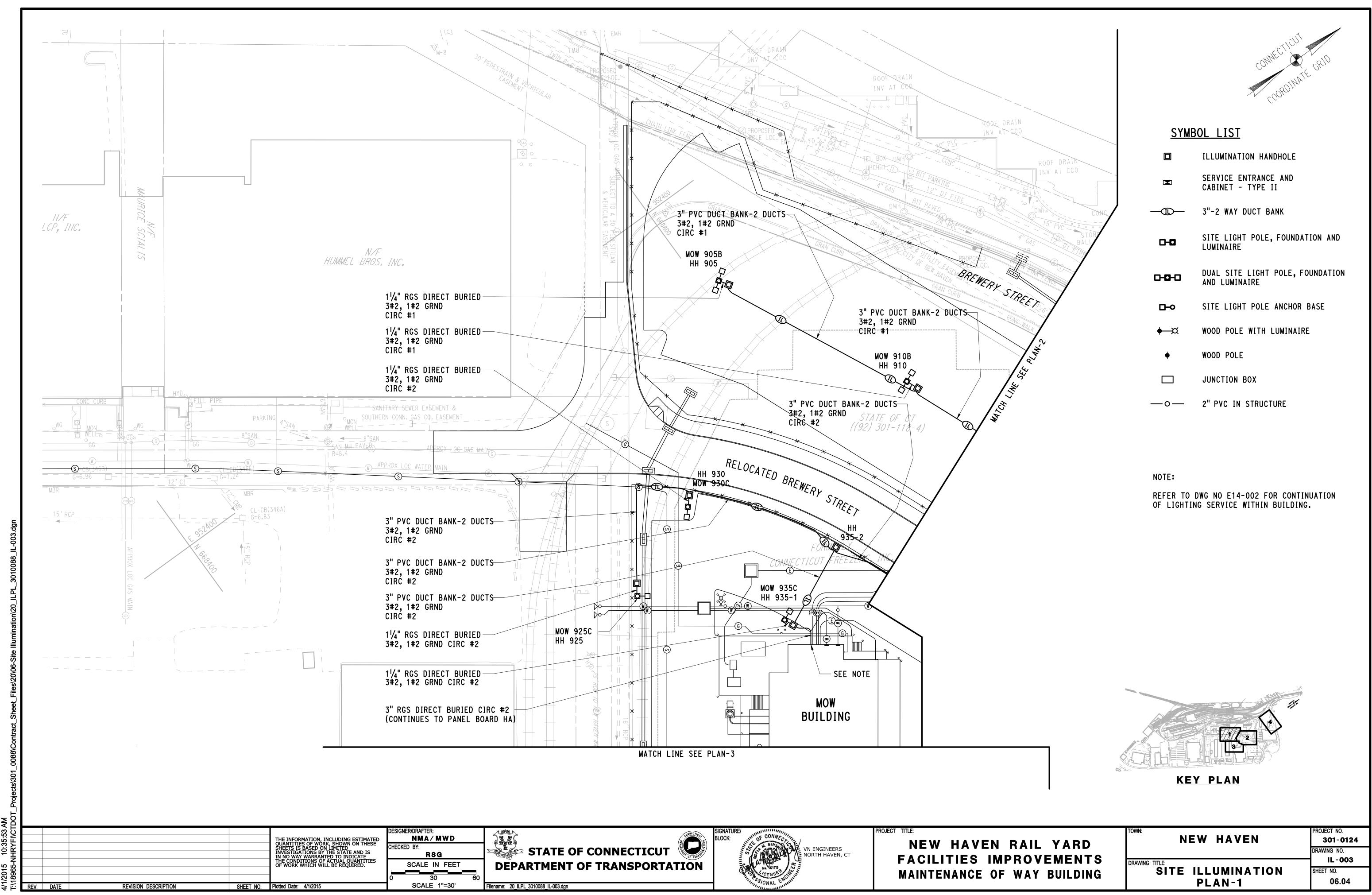




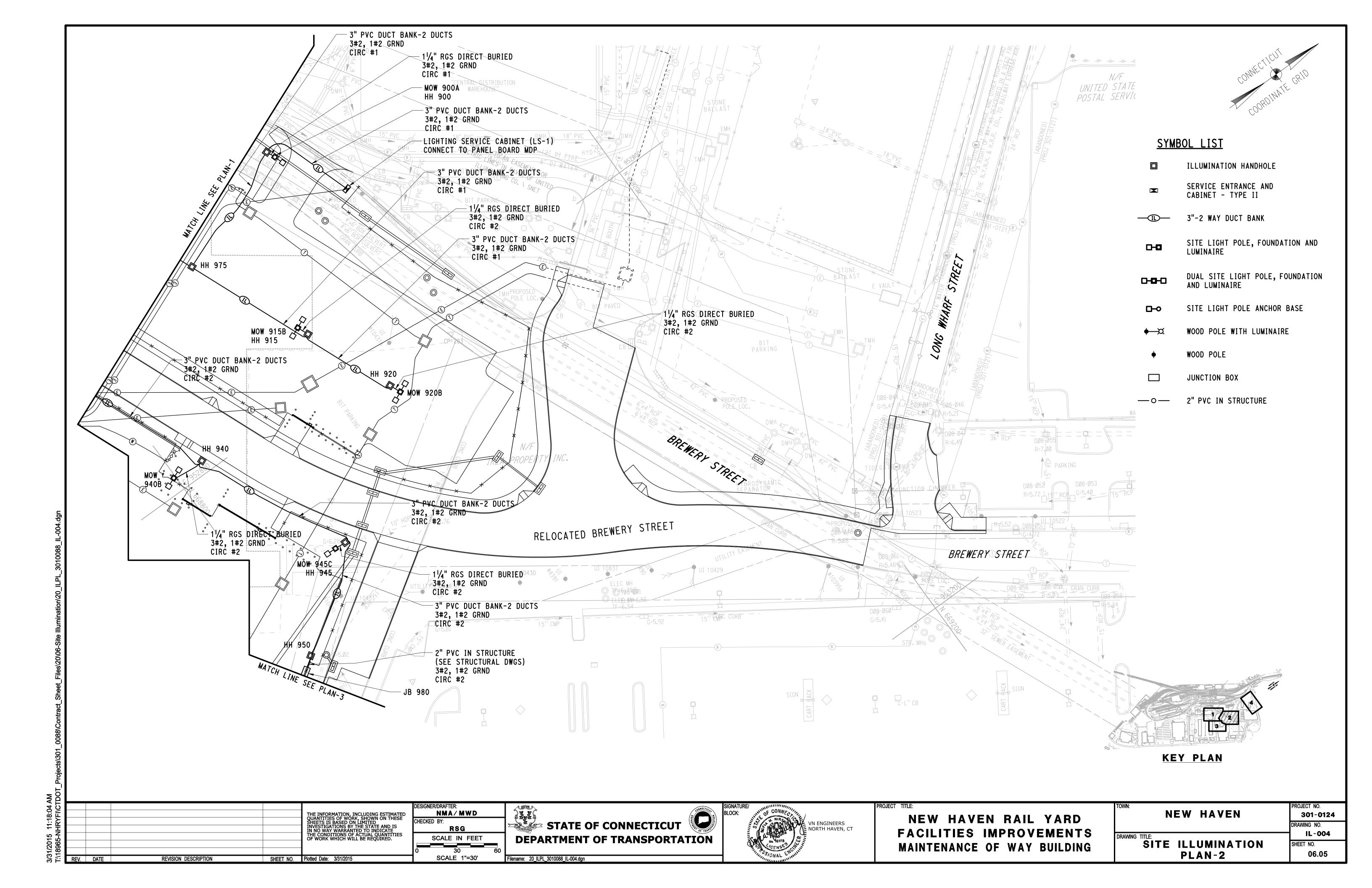
NEW HAVEN RAIL YARD FACILITIES IMPROVEMENTS MAINTENANCE OF WAY BUILDING

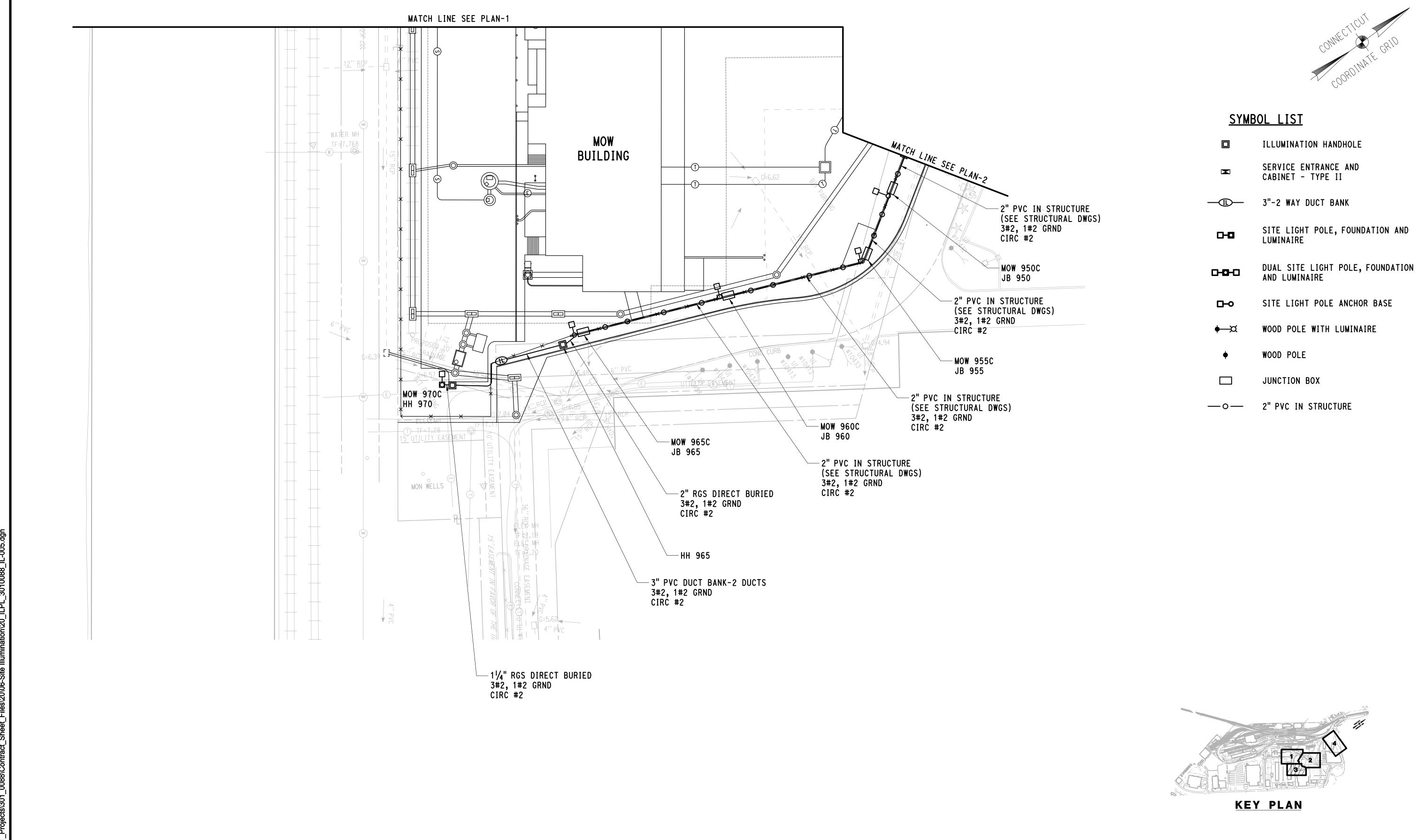
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4/1/2015 10:35:53 AM





REV. DATE

REVISION DESCRIPTION

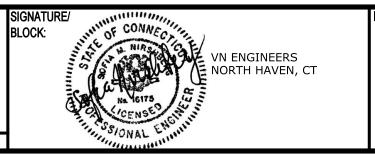
ESIGNER/DRAFTER:

NMA/MWD SCALE IN FEET SCALE 1"=30'

SHEET NO. Plotted Date: 3/27/2015

RSG

STATE OF CONNECTICUT **DEPARTMENT OF TRANSPORTATION** Filename: 20_ILPL_3010088_IL-005.dgn



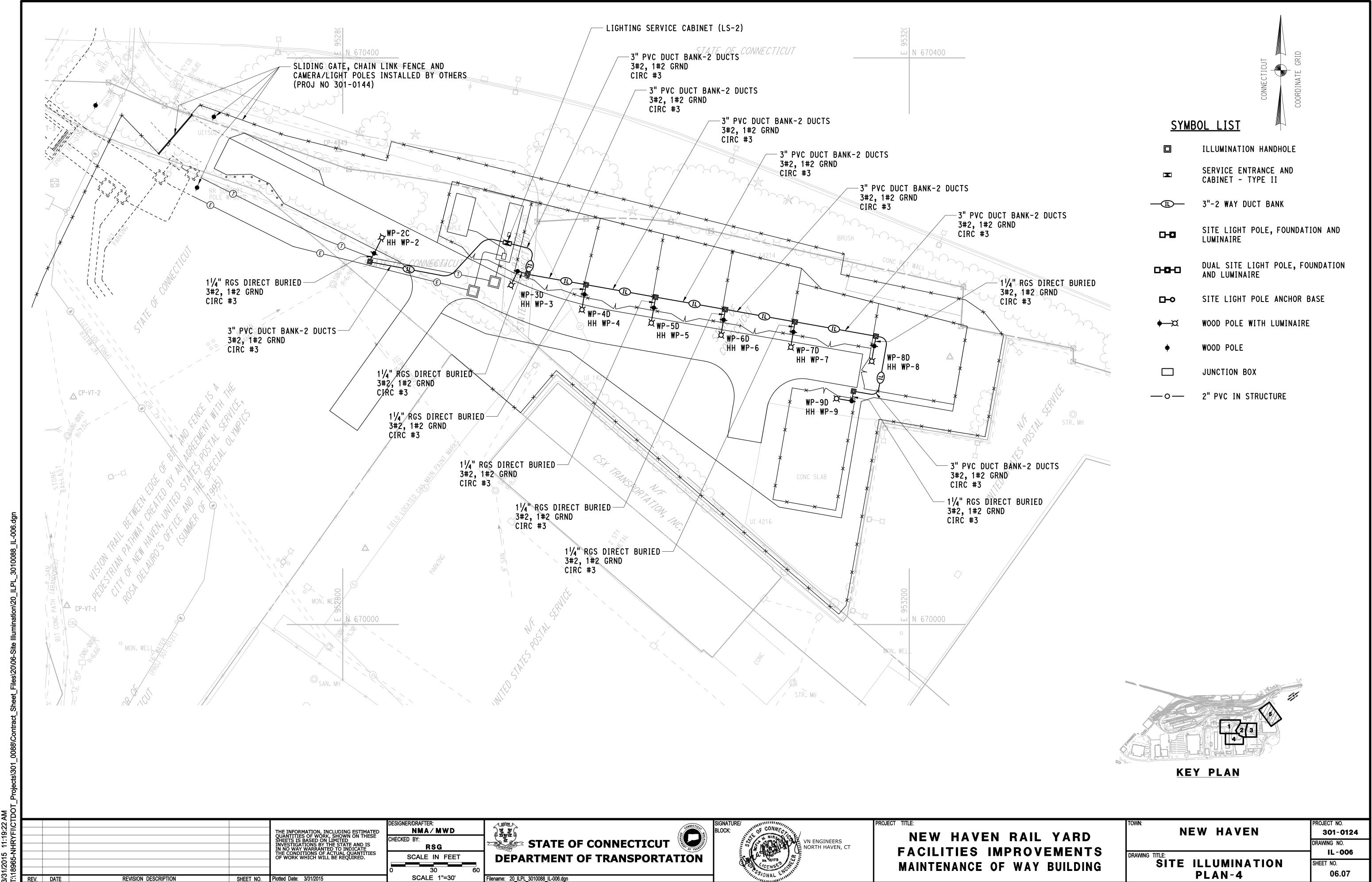
NEW HAVEN RAIL YARD FACILITIES IMPROVEMENTS MAINTENANCE OF WAY BUILDING

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SITE ILLUMINATION PLAN-3

IL-005 SHEET NO. 06.06

301-0124



WP-5D, WP-6D, WP-7D, WP-8D AND WP-9D.

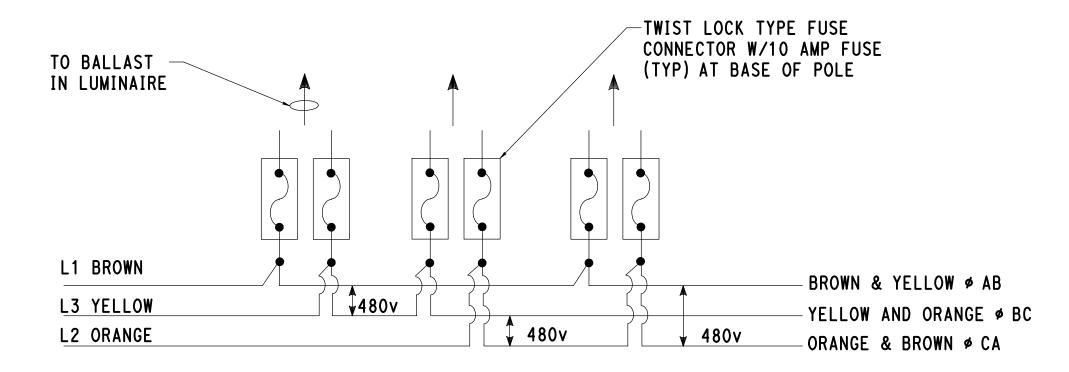
TYPICAL ILLUMINATION UNIT ON WOOD POLE

ROADWAY LUMINAIRE LED (MEDIUM, FULL-CUTOFF, TYPE IV OR V AS PER PLANS) MULTI TAP BALLAST

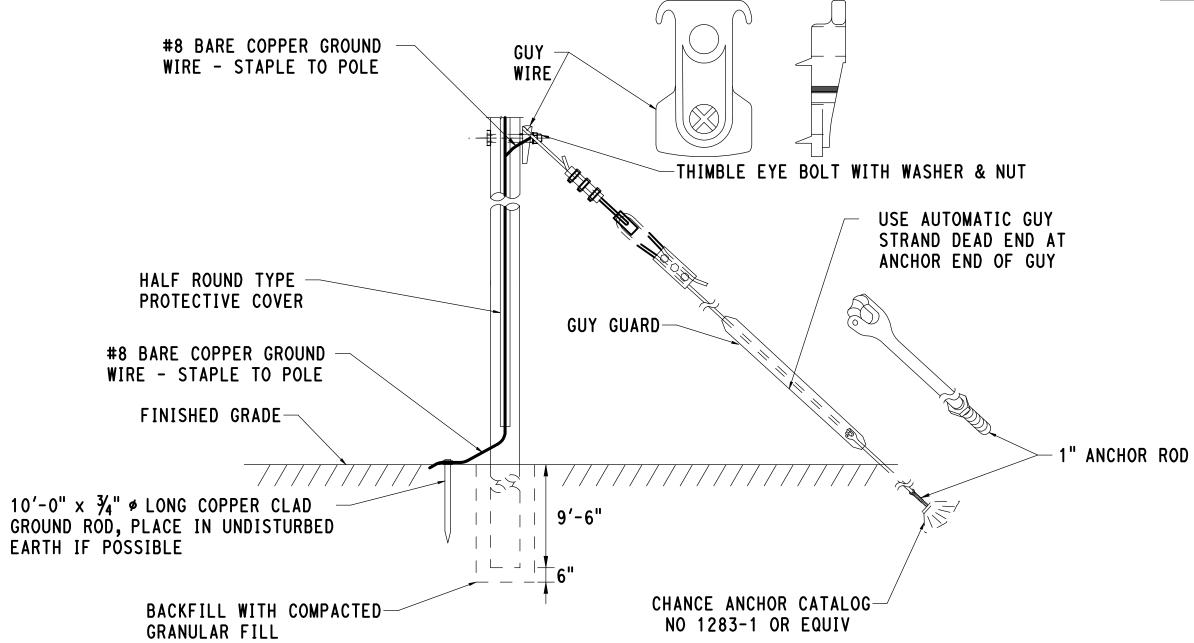
MOUNTED MIN 30' ABOVE GROUND ELEV (REFER TO LUMINAIRE SCHEDULE ON DWG NO IL-001)

-TWIST LOCK TYPE FUSE CONNECTOR W/10 AMP FUSE TO BALLAST (TYP) AT BASE OF POLE IN LUMINAIRE L1 BROWN - BROWN & YELLOW ♦ AB L3 YELLOW ₹240v L2 ORANGE **1** 240∨ 240v ORANGE & BROWN ♦ CA

240v 3 PHASE 3 WIRE SYSTEM DETAIL



480v 3 PHASE 3 WIRE SYSTEM DETAIL



ALL GUY WIRES SHALL BE ENCASED. HIGH VISIBILITY YELLOW PLASTIC SAFETY COVERS TO A HEIGHT OF 8 FEET ABOVE GROUND ELEVATION.

TYPICAL GUY WIRE INSTALLATION

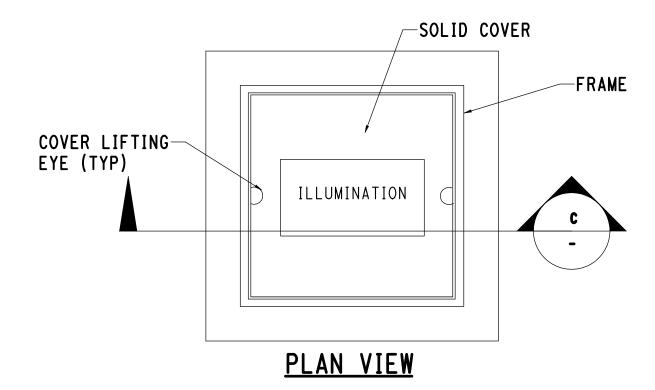
ESIGNER/DRAFTER:

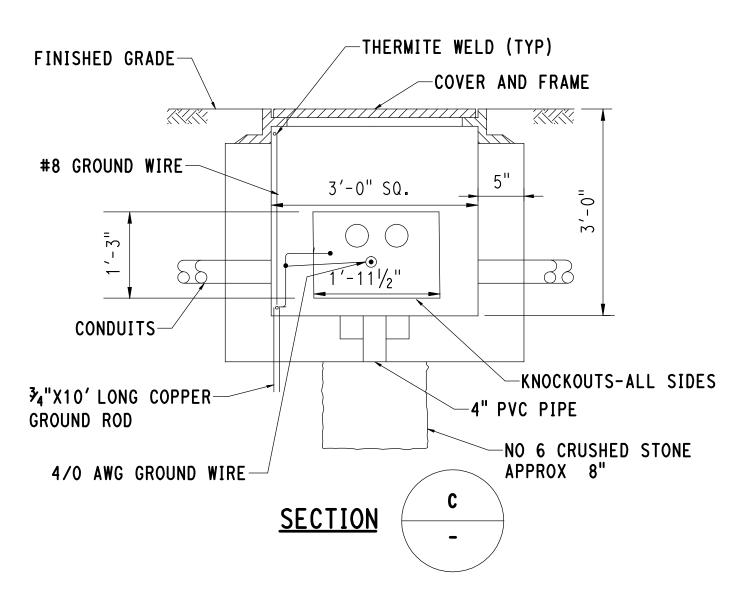
NMA/MWD STATE OF CONNECTICUT **NEW HAVEN** 301-0124 NEW HAVEN RAIL YARD VN ENGINEERS NORTH HAVEN, CT RSG FACILITIES IMPROVEMENTS IL-021 **DEPARTMENT OF TRANSPORTATION** SITE ILLUMINATION SHEET NO. MAINTENANCE OF WAY BUILDING NOT TO SCALE **DETAILS** 06.08 REVISION DESCRIPTION SHEET NO. Plotted Date: 4/1/2015 Filename: 20_ILDT_3010088_IL-021.dgn REV. DATE

2-WAY DUCT BANK SCHEDULE

			WIRE OR CABLE			
FROM	ТО	NO.	CONDUCTOR SIZE	INSTALLATION	LENGTI FT	
*MOW BUILDING	*HH 935-1	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	10	
HH 935-1	HH 935-2	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	65	
HH 935-2	HH 940	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	145	
HH 935-2	HH 930	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	120	
HH 930	HH 925	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	110	
HH 905	HH 910	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	160	
HH 910	HH 975	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	70	
HH 975	HH 900	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	105	
HH 900	SERVICE	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	75	
HH 975	HH 915	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	105	
HH 915	HH 920	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	80	
HH 940	HH 945	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	135	
HH 945	HH 950	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	100	
HH 970	HH 965	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	84	
HH WP-2	SERVICE	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	115	
HH WP-3	SERVICE	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	40	
HH WP-3	HH WP-4	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	55	
HH WP-4	HH WP-5	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	55	
HH WP-5	HH WP-6	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	55	
HH WP-6	HH WP-7	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	55	
HH WP-7	HH WP-8	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	65	
HH WP-8	HH WP-9	3 #2 1 #2	XHH W, 600V	SITE ILLUMINATION	70	

*SEE BUILDING ELECTRICAL PLANS

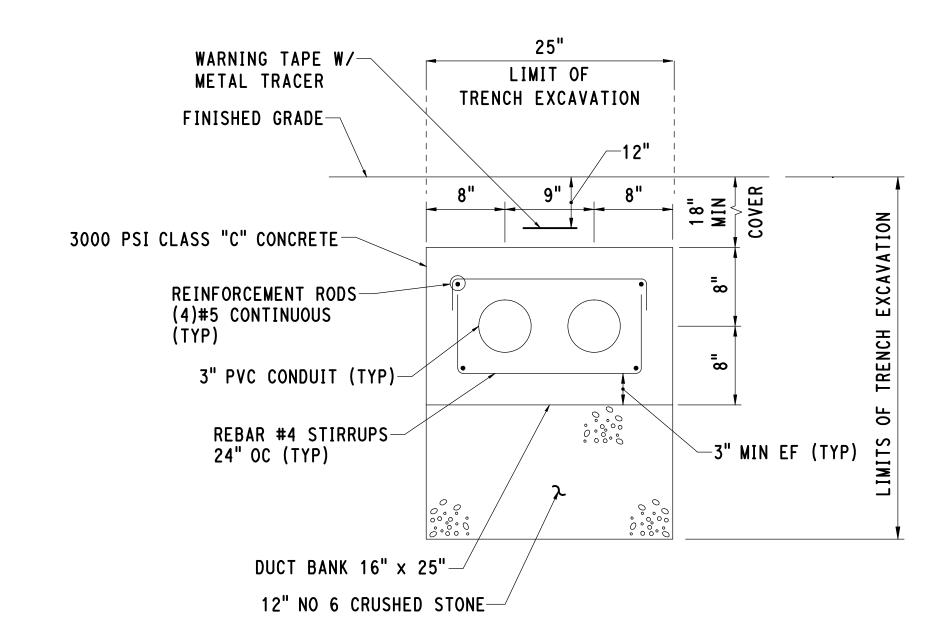




NOTES:

- 1. PROVIDE CONTINUOUS COAT OF DAMP-PROOFING ON ALL SIDES OF HANDHOLES.
- 2. PROVIDE WATERTIGHT SEAL AROUND THE GROUND RODS AND ALL CONDUIT PENETRATIONS.
- 3. PROVIDE 8" OF NO 6 CRUSHED STONE BELOW HANDHOLES.
- 4. ALL SPLICES MUST BE APPROVED FOR SUBMERSIBLE LOCATIONS.
- 5. ALL HANDHOLES SHALL BE DESIGNED BY A CT LICENSED ENGINEER FOR HS-20 LOADINGS.

TYPICAL PRECAST ILLUMINATION HANDHOLE



NOTES:

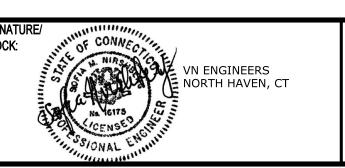
- 1. PLACE NO 6 CRUSHED STONE TO SEASONAL HIGH GROUND WATER ELEV 5.0.
- 2. SUITABLE BACKFILL MATERIAL SHALL BE ANY SUITABLE BACKFILL MATERIAL EXCAVATED FROM THE RESPECTIVE TRENCH THAT IS ACCEPTABLE TO THE ENGINEER. GRANULAR FILL SHOULD BE USED IN ABSENCE OF SUITABLE BACKFILL MATERIAL AS DIRECTED BY THE ENGINEER.
- 3. DUCT BANK REINFORCEMENT SHALL BE CONNECTED TO BUILDING FOUNDATION WALL AS INDICATED ON THE STRUCTURAL DRAWINGS.

2-WAY DUCT BANK SECTION DETAIL

					DES
				THE INFORMATION, INCLUDING ESTIMATED	
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REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 4/1/2015	

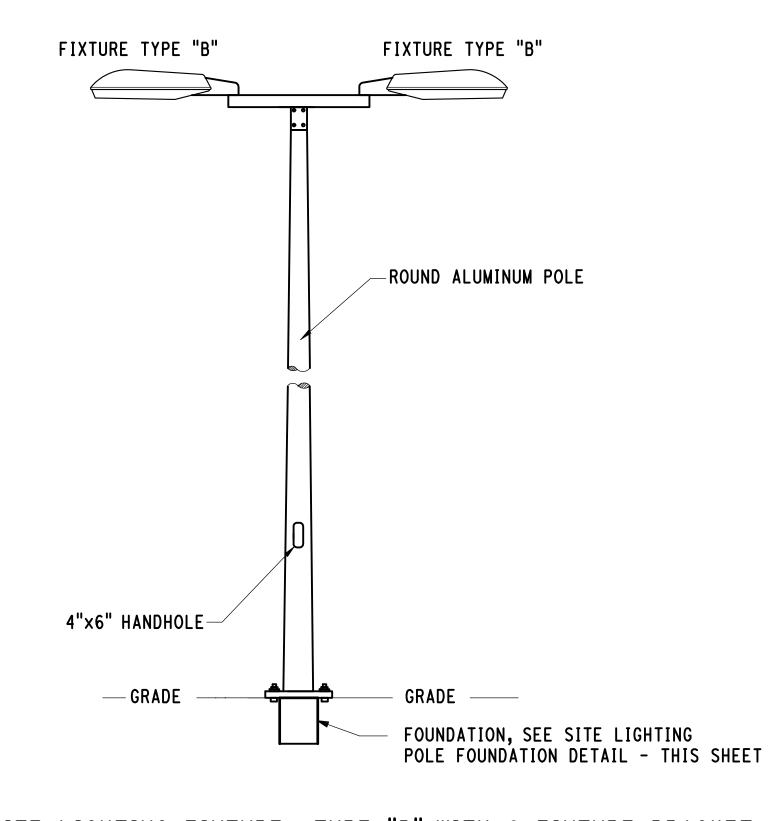
NMA/MWD RSG NOT TO SCALE

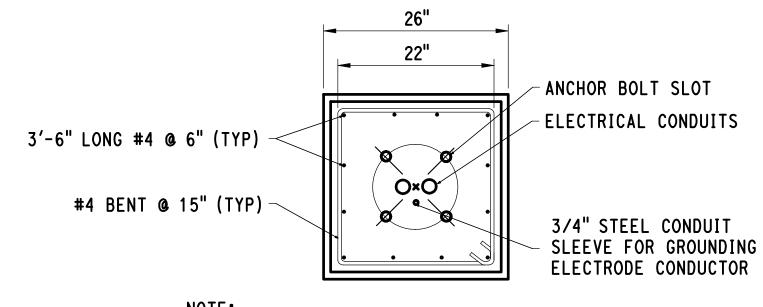
STATE OF CONNECTICUT **DEPARTMENT OF TRANSPORTATION** Filename: 20_ILDT_3010088_IL-022.dgn



NEW HAVEN RAIL YARD FACILITIES IMPROVEMENTS MAINTENANCE OF WAY BUILDING

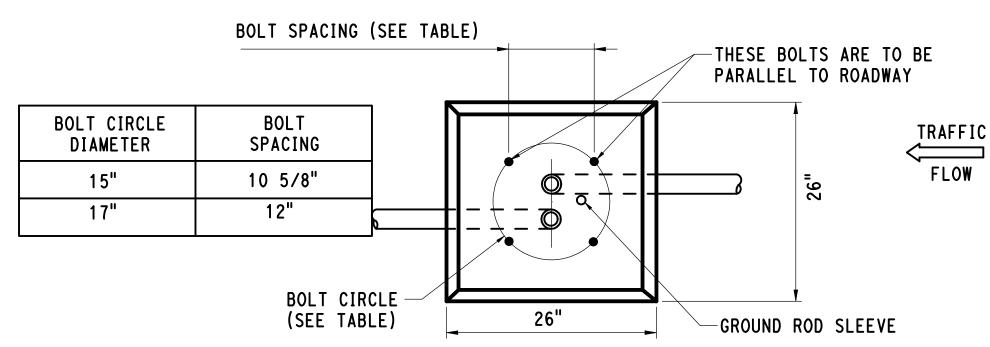
	LUMINATION Etails	SHEET NO. 06.09
		DRAWING NO.
NEV	V HAVEN	PROJECT NO. 301-0124
		DDO IECT NO



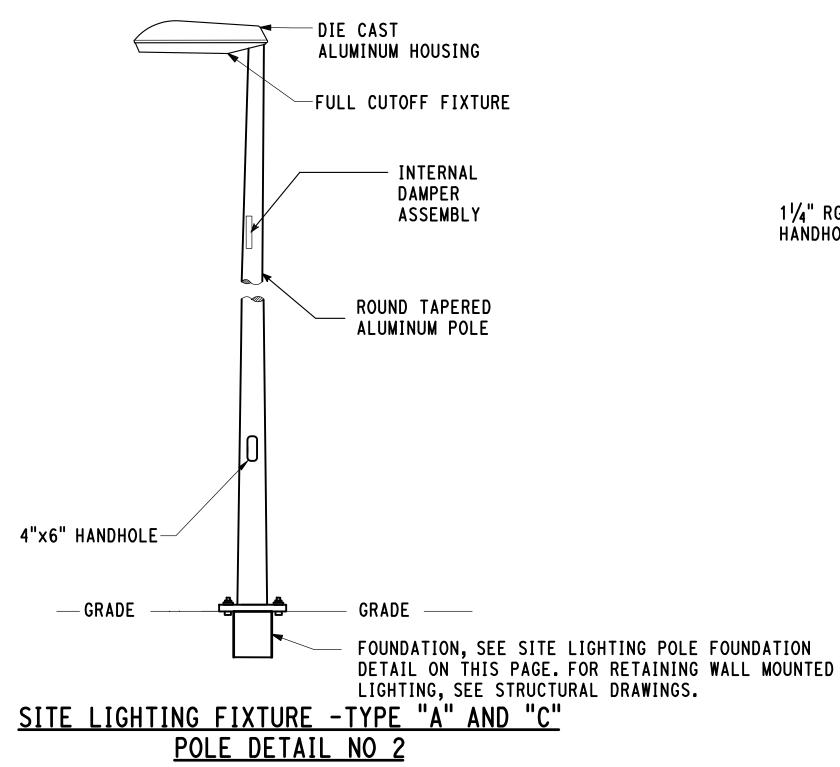


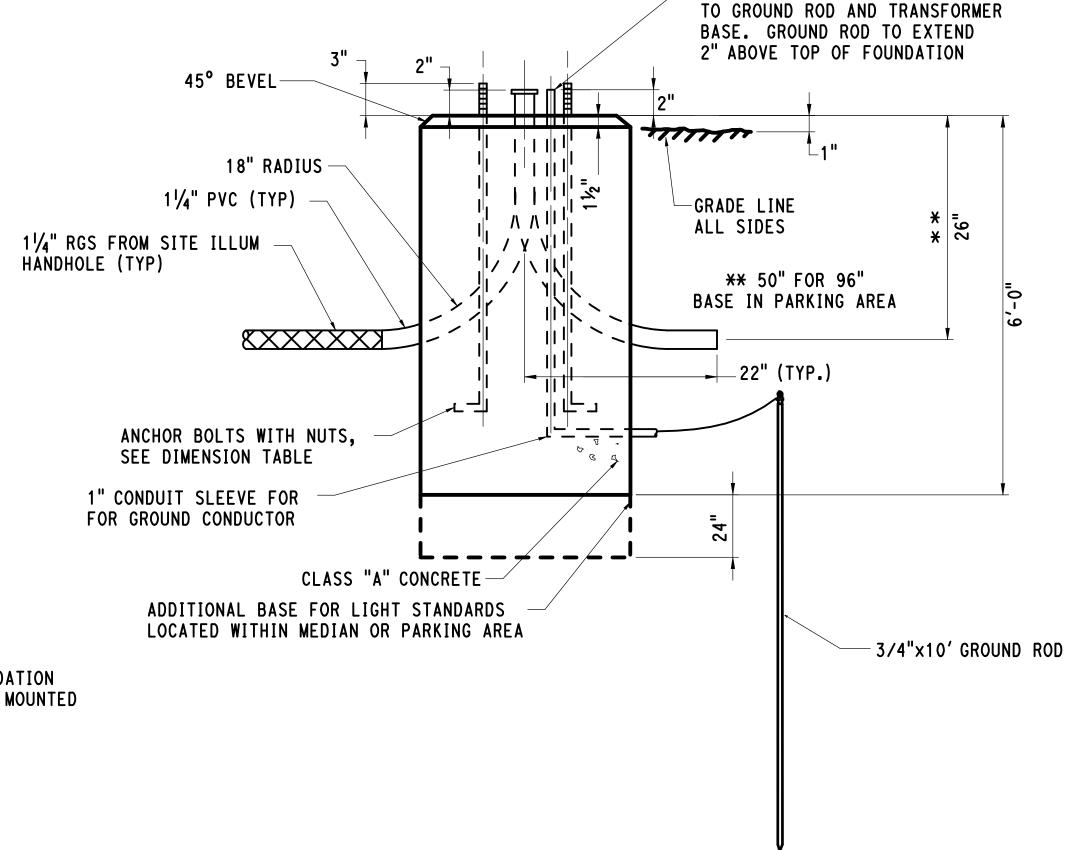
NOTE:
FACTORY SUPPLIED TEMPLATES MUST BE USED
WHEN SETTING ANCHOR BOLTS, FIELD VERIFY
DIMENSIONS BEFORE CONSTRUCTION.

SITE LIGHTING POLE BASE DETAIL (TYP)



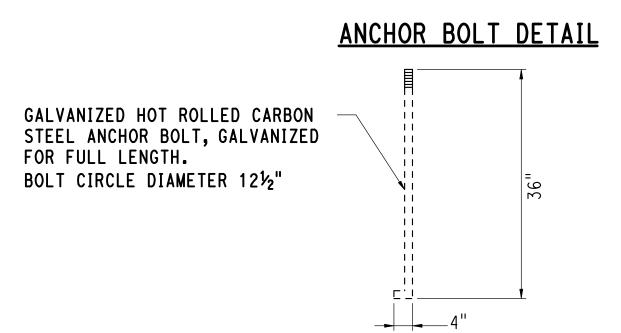
SITE LIGHTING FIXTURE -TYPE "B" WITH 2 FIXTURE BRACKET POLE DETAIL NO 1

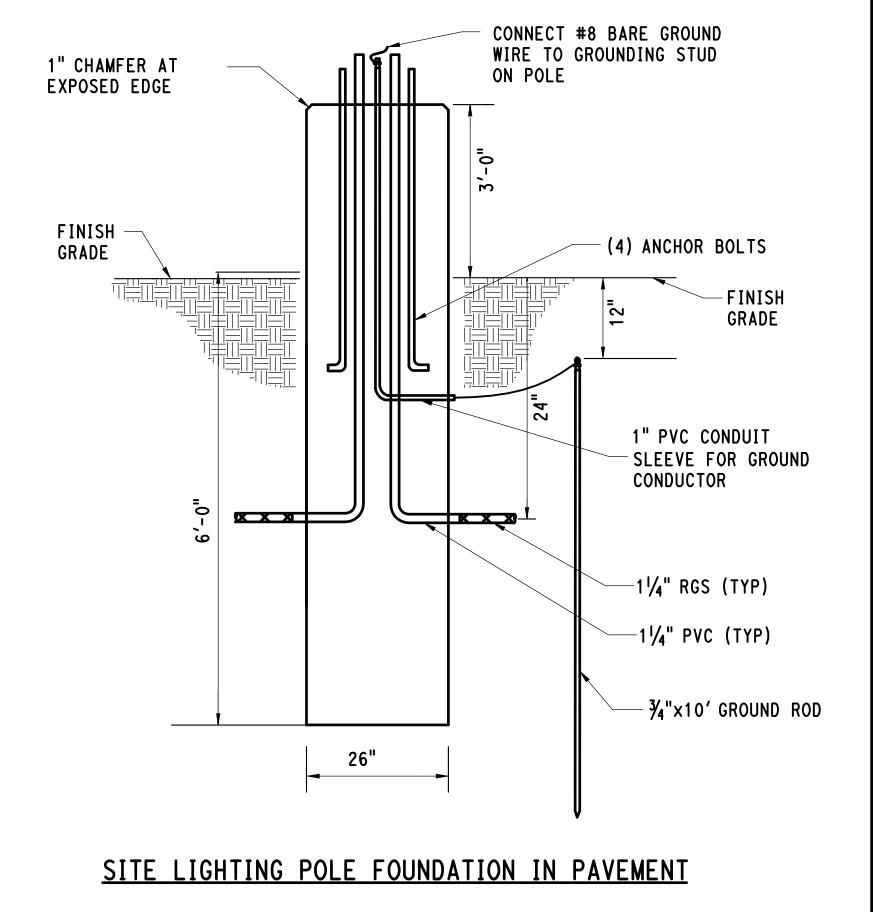




NOTES:

- 1. ALL SITE LIGHTING FIXTURES AT THE MAINTENANCE OF WAY BUILDING AND THE CCO SHOP PARKING LOT SHALL CONSIST OF 1 OR 2 284 WATT LED MOUNTED AT 30' ON AN ALUMINUM POLE. THE POLE SHALL CONSIST OF A 4" ALUMINUM SHAFT WITH AN INTEGRATED BASE. THE SHAFT SHALL BE ONE PIECE AND SHALL BE DESIGNED TO WITHSTAND A WIND SPEED OF 90 MPH IN ACCORDANCE WITH AASHTO "STANDARD SPECIFICATIONS TO STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".
- 2. EQUIP SITE LIGHTING LUMINAIRES WITH SEPARATE BOND AND GROUND LUGS.





SITE LIGHTING POLE FOUNDATION IN GRASS

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REV. DATE REVISION DESCRIPTION SHEET NO. Plotted Date: 3/27/2015

ESIGNER/DRAFTER:

MWD/MWD

HECKED BY:

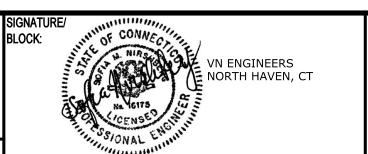
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NOT TO SCALE

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

Filename: 20_ILDT_3010088_IL-023.dgn



#8 GROUND WIRE CONNECTION

NEW HAVEN RAIL YARD FACILITIES IMPROVEMENTS MAINTENANCE OF WAY BUILDING

N:	PROJECT NO.
NEW HAVE	N 301-0124
	DRAWING NO.
MNG TITLE:	IL-023
SITE ILLUMINA	TION SHEET NO.
DETAILS	06.10

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